IGEL OS: THE PERFECT ENDPOINT DEVICE OPERATING SYSTEM FOR VDI, CLOUD SOLUTIONS, AND DAAS

The move to digital workspaces has accelerated to be considered a viable alternative to fully-contained physical endpoints like desktop PCs or laptops in many enterprises. Initially, these digital workspaces were delivered primarily via virtual desktop infrastructure (VDI), hosted within corporate data centers. In the early 2000's, VDI helped initiate the migration of Windows to the cloud. As a result, many companies of all sizes, especially those where security and compliance cannot be compromised, are now moving some of their desktops toward Desktop-as-a-Service (DaaS) solutions to meet their digital workspace needs.

This desktop cloud migration process was accelerated by the COVID-19 pandemic that has sent millions of people — and their work — to their homes. But aside from the pandemic, environmental disasters including historic fires or floods are reasons not to come to the office. Working from home or from widely distributed workplaces also plays a factor to counteract the environmental greenhouse effect, as work commute distances are considerably shortened or eliminated altogether.

The move to cloud and DaaS as a smart evolutionary process can be exemplified in multiple ways:

Pay-as-you-go has become the standard payment method in the digital era. Subscription-based and consumption models increase flexibility and reduce costs at the same time. Just as one example, why pay for a digital workspace that is no longer needed after an employee has left? Subscription and consumption based arrangements make a situation like that a non-concern.
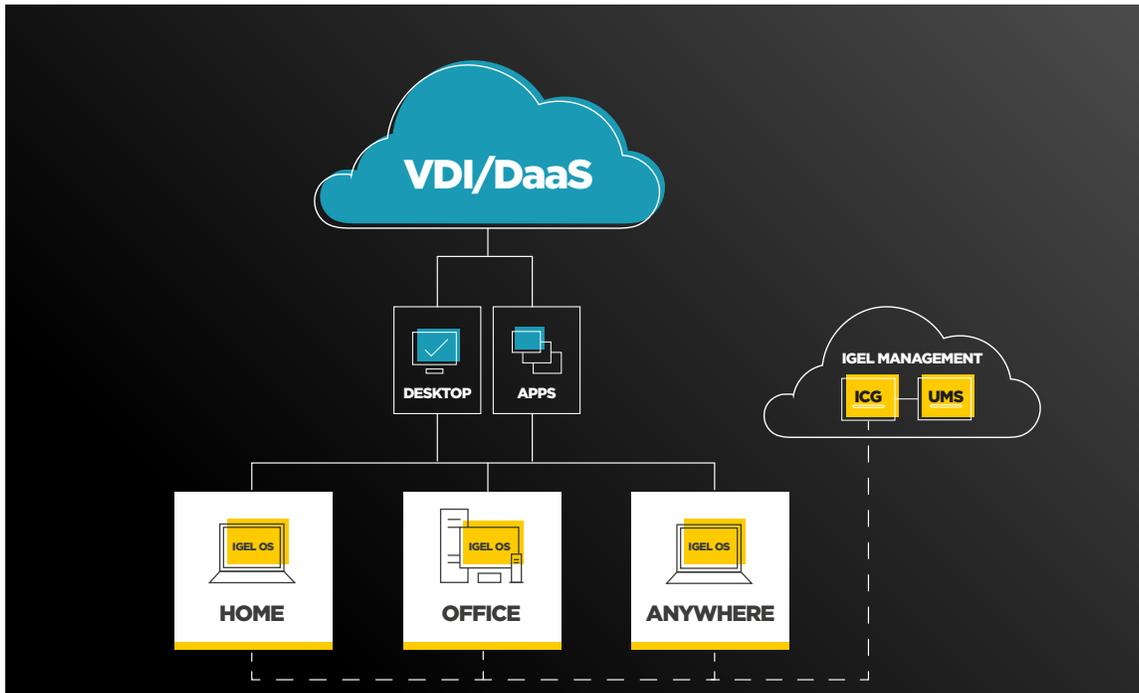
Management and support of a vast number of physical workstations running locally installed software is a proven challenge for IT teams, especially in installations of many hundreds or thousands of endpoint devices. Managing physical endpoints — often across multiple locations — is difficult, disruptive, time-consuming, and expensive. Every device needs regular software updates, bug fixes, security updates, and other additions. User support, troubleshooting, and data backup are time-consuming and expensive with fully-loaded physical endpoints, not to mention the decreasing lifetime of hardware in times of constantly accelerating processor and memory technologies.

The shift to cloud and DaaS models starts with centrally managed digital workspaces, easy and flexible to use, without a "sneaker network" needed to maintain and operate.

According to a Gartner report[1] from Q2 2021, global public cloud services revenue was expected to grow 23% to more than $332 billion in 2021. Desktop-as-a-Service (DaaS) saw the largest growth of 67.7% in 2021.

[1] https://www.gartner.com/en/newsroom/press-releases/2021-04-21-gartner-forecasts-worldwide-public-cloud-end-user-spending-to-grow-23-percent-in-2021

Recently, two providers of DaaS services for digital workspaces have established themselves as industry leaders. Microsoft, offering its Azure Virtual Desktop (AVD) service, and Amazon, providing its Amazon Web Services (AWS). Which service should be used in a particular scenario should be decided on an individual basis based on business, IT, and end-user needs. As a matter of fact, IGEL OS, the next-gen edge OS for cloud workspaces, supports the services of both companies and maintains a strong technology partnership with both Microsoft and Amazon.

In addition to desktop-as-a-service (DaaS), the use of other cloud-based solutions is reasonable. Some examples include several software-as-a-service (SaaS) offerings:

- **Microsoft 365 (former Office 365):**
  A subscription product providing office applications such as Word, Excel, PowerPoint, and also Outlook, Teams and SharePoint. It combines online services and local running software with attached Windows 365 Cloud PCs, where all applications can be streamed securely from the Microsoft Azure Cloud to any device.

- **Salesforce.com:**
  A CRM solution managing customer relationships, with all departments, including marketing, sales, customer service, and online and stationary trading commerce work on a common CRM platform. So, everyone has the same view of their customers to help ensue the best customer experience and outcomes.

- **ServiceNow:**
  A cloud-based digital workflow platform to request services, automate routine tasks, or interact with other departments.

- **Workday:**
  A cloud-based software for human resources departments, appealing to companies with international operations. In Workday, the HR data of all company locations can be consolidated in one platform with standardized HR processes worldwide.

Why is IGEL OS the perfect choice for the use of cloud solutions and DaaS?

- Running Windows in the cloud is much easier to secure than running Windows on hundreds or many thousands of end user devices. IGEL OS is hardware agnostic and thus makes it easy to convert any compatible x86-64 device, regardless of manufacturer or form factor, into a highly secure, standardized endpoint. With IGEL OS, most if not all existing endpoint devices are already "cloud ready".

- The combined benefits of IGEL OS and DaaS lead to substantial ongoing cost savings. Fast and error-free updates, simpler technical support, elimination of remote Windows patching, and lower overall endpoint software licensing costs cut recurring endpoint management costs by more than 50%[1], thereby leading to potentially enormous savings on OPEX!

- Running lean and lightweight IGEL OS on existing or lower cost endpoints can save lots of CAPEX! Even supposedly old-fashioned or outdated devices likely have more than enough CPU power and RAM to access the cloud.

- The reuse of existing Windows PCs and laptops as IGEL OS-powered endpoints rather than purchasing new, reduces carbon footprint by 60%. Energy efficiency is improved by between 22-49%, depending on solution and approach[2].

- Lean and efficient IGEL OS offers significant performance gains over Windows when accessing VDI, DaaS, and other cloud-based services. RawWorks[3], an independent product testing and analysis firm, conducted comparative performance tests of IGEL OS and Windows 10 on three commonly used endpoint devices to see how IGEL OS affects device performance when compared to native Windows. The result: IGEL OS showed significant performance gains over Windows across all typical usage scenarios. Average improvement with IGEL OS for each usage scenario:

  - Video conferencing: CPU utilization reduced by 70%
  - 60 FPS HD Video Streaming: CPU utilization reduced by 55%
  - 3D CAD model rendering: CPU utilization reduced by 42%
  - HD 3D virtualization: CPU utilization reduced by 42%
  - Power Point with embedded video: CPU utilization reduced by 55%

The above conclusions as measured test results reveal how, in addition to extending the useful life of existing endpoint devices, simply replacing Windows with IGEL OS injects significant performance gains as well.

[1] Source: Tolly Group, January 2020: https://www.igel.com/wp-content/uploads/2020/01/Tolly-IGELOS11-Windows10-TCO.pdf/

[2] PX3 sustainability benchmark results: https://www.igel.com/sustainability/

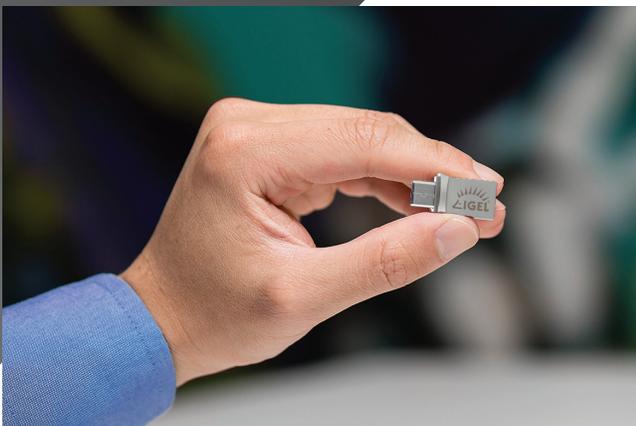[3] Raw Works report: https://www.igel.com/igel-os-experience-is-everything/

IGEL offers the essential components needed to enable enterprises to operate in a cost-effective, flexible, and "green" working environment.

IGEL OS

IGEL OS was *designed* for access cloud-based services and virtual apps and desktops. It runs on any compatible x86-64 endpoint and can thus extends its life by many years.
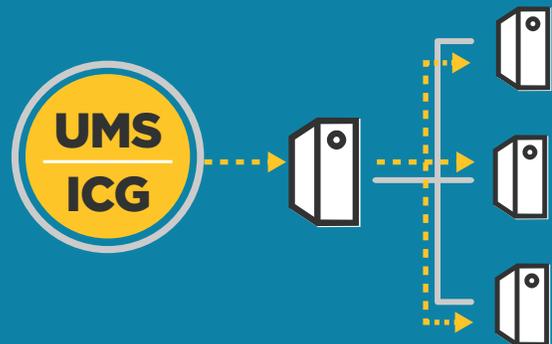
IGEL UD Pocket

A portable and powerful USB pluggable endpoint solution and no larger than a paper clip, the UD Pocket and UD Pocket2 are essentially "IGEL OS on a stick" and offer secure high performance for remote and mobile workers. With the UD Pocket, IGEL OS boots from an available USB port on a PC, laptop, or any compatible x86-64 CPU-based endpoint device.

Universal Management Suite (UMS)

A single management and control solution for just a few to up to 300,000 distributed IGEL OS-powered endpoint devices. Purpose-built to simplify complex enterprise environments, UMS supports diverse operating systems, databases, and directories. The UMS server can be located on the corporate network or in the cloud.

IGEL Cloud Gateway (ICG)

Enables full UMS management and control of IGEL OS-powered endpoints located "off-network" in remote locations including home offices, remote campuses, or for mobile "road warrior" workers. It extends the reach of UMS without requiring a separate VPN connection to ensure strong management and control of all your IGEL OS-powered endpoints, regardless of their location.

Why manage Windows if you don't have to?

Let your cloud provider manage Windows as a cloud or DaaS service, and you can focus on the much simpler task of managing lean, secure, and efficient IGEL OS on all your physical endpoints. Life will suddenly become much easier for both your end-users and your IT team!

Download IGEL Workspace Edition to Get Started Today

Are you ready to enjoy all the benefits of cloud services and DaaS reached by your own lean and green endpoints? **Download IGEL Workspace Edition for free** to experience the simplest, most cost-effective, and most secure way to deliver Windows desktops to your users.

Your IGEL Workspace Edition download will include 3 IGEL OS licenses and complete access to IGEL Universal Management Suite for management, all of which are free to use for up to 90 days.

IGEL
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